Amendments to the Claims

1. (Previously amended) A therapeutic composition effective on contact with thrombin at a site of treatment in a patient as a tissue adhesive, hemostat or sealant, said composition comprising non-autologous, non-single donor mammalian, clottable fibrinogen recovered from a process comprising precipitating fibrinogen from a sample of non-human, mammalian blood plasma with polyethylene glycol 1000 and reprecipitating said fibrinogen with glycine, wherein precipitation of said fibrinogen with polyethylene glycol is performed only once, such that at least about 90% of the fibrinogen present in said sample is recovered, wherein said recovered fibrinogen polymerizes when provided in solution at said site at a therapeutically effective fibrinogen concentration of about 10 mg/ml thereof or less, to a fibrin network having therapeutically effective strength, wherein said therapeutically effective fibrinogen concentration at said site is about 10 mg/ml or less, and said composition further comprising a sufficient amount of one or more physiologically-compatible solutes such that said composition, if formulated as a lyophilized material, can be reconstituted therefrom at room temperature in sterile water for injection in about 30 minutes or less, at about 25 mg/ml of said fibrinogen; wherein about 95%, or greater, of total protein present in said composition is fibrinogen, of which fibrinogen at least about 56% is clottable fibrinogen.

2. (Previously amended) A therapeutic composition effective on contact with thrombin at a site of treatment in a patient as a tissue adhesive, hemostat or sealant, said composition comprising non-autologous, non-single donor mammalian, clottable fibrinogen recovered from a process comprising precipitating fibrinogen from a sample of non-human, mammalian blood plasma with polyethylene glycol 1000 and reprecipitating said fibrinogen with glycine, wherein precipitation of said fibrinogen with polyethylene glycol is performed only once, such that at least about 90% of the fibrinogen present in said sample is recovered, wherein said recovered fibrinogen polymerizes when provided in solution at said site at a therapeutically effective fibrinogen concentration of about 30 mg/ml thereof or less, to a fibrin network having therapeutically effective strength,

wherein said therapeutically effective fibrinogen concentration at said site is about 30 mg/ml or less,

wherein said composition contains less than about 30% (w/w), based on total protein mass present therein, of proteins other than fibrinogen, and said composition further comprises a sufficient amount of one or more low molecular weight physiologically-compatible solutes such that said composition, if formulated as a lyophilized material, can be reconstituted therefrom at room temperature in sterile water for injection in about 30 minutes or less, at about 25 mg/ml of said fibrinogen, of which fibrinogen at least about 56% is clottable fibrinogen.

3. (Original) A therapeutic composition according to Claim 2 prepared as a lyophilized material.

4. (Original) A therapeutic composition according to Claim 3 wherein said sufficient amount of solute comprises between about 0.10 mg and about 0.50 mg of sodium citrate per mg of fibrinogen.

5. (Original) A therapeutic composition according to Claim 3 wherein said sufficient amount of solute comprises between about 0.075 mg and about 1.0 mg of epsilon-aminocaproic acid per mg of fibrinogen.

6. (Original) A therapeutic composition according to Claim 4 wherein said sufficient solute further comprises, per mg of fibrinogen, between about 0.075 mg and about 1.0 mg of epsilon-aminocaproic acid.

7. (Currently Amended) A therapeutic composition according to Claim 2 ~~capable of said polymerization~~ which polymerizes when said fibrinogen thereof is made present at said site of treatment at a concentration of about 10 mg/ml or less.

8. (Original) A therapeutic composition according to Claim 2 prepared as a solution.

9. (Original) A therapeutic composition according to Claim 8 that is frozen.

10. (Original) A therapeutic composition according to Claim 2 containing bovine fibrinogen.

11. (Currently Amended) A therapeutic composition according to Claim 2 ~~capable of undergoing said effective polymerization~~ which polymerizes at said treatment site when made present at a concentration thereof that provides between about 5 mg/ml and about 30 mg/ml of clottable fibrinogen.

12. (Original) A fibrinogen-containing therapeutic composition according to Claim 2 comprising, as percent by weight of total protein contained therein,

clottable fibrinogen, at about 56% or greater;
serum albumin, at less than about 20%;
gamma globulin, at less than about 10%;
plasminogen, at less than about 1%; and
plasma fibronectin, at less than about 3%.

13. (Previously amended) A reactive therapeutic composition effective on contact at a site of treatment in a patient as a tissue adhesive, hemostat or sealant, said composition comprising, per milliliter thereof, between about 0.05 and about 500 NIH units of thrombin and also, per milliliter, between about 5 and about 30 mg of a fibrinogen composition wherein clottable fibrinogen is recovered from a process comprising precipitating fibrinogen from a sample of non-human, mammalian blood plasma with polyethylene glycol 1000 and reprecipitating said fibrinogen with glycine, wherein precipitation of said fibrinogen with polyethylene glycol is performed only once, such that at least about 90% of the fibrinogen present in said sample is recovered, said recovered fibrinogen polymerizes to a fibrin network having therapeutically effective strength, when present at said site at a therapeutically effective fibrinogen concentration of about 30 mg/ml or less, wherein said therapeutically effective fibrinogen concentration at said site is about 30 mg/ml or less; wherein about 95%, or greater, of total protein present in said fibrinogen composition is fibrinogen, of which fibrinogen at least about 56% is clottable fibrinogen.

14. (Original) A method for maintaining the therapeutic effectiveness of a composition according to Claim 8 comprising the step of maintaining said solution at a pH of between about 7.5 and about 8.5.

15-34 (Cancelled)

35. (Previously added) A therapeutic composition according to Claim 1 prepared as a lyophilized material.

36. (Currently amended) A therapeutic composition ~~having a high yield of fibrinogen and being~~ effective on contact with thrombin at a site of treatment in a patient as a tissue adhesive, hemostat or sealant, said composition comprising non-autologous, non-single donor mammalian fibrinogen that ~~is capable of polymerizing~~ polymerizes when provided in solution at said site at a concentration of about 10 mg/ml thereof or less, to a fibrin network having therapeutically effective strength, and further comprising a sufficient amount of one or more physiologically-compatible solutes such that said composition, if formulated as a lyophilized material, can be reconstituted therefrom at room temperature in sterile water for injection in about 30 minutes or less, at about 25 mg/ml of said fibrinogen; wherein said therapeutic composition is prepared by the following steps: (A) precipitating said fibrinogen from a sample of non-human mammalian blood plasma with polyethylene glycol 1000; (B) resuspending said fibrinogen in solution; and (C) reprecipitating said fibrinogen with glycine, wherein reprecipitation of said fibrinogen with polyethylene glycol is performed only once and at least about 90% of the fibrinogen present in said sample is recovered, of which fibrinogen at least about 56% is clottable fibrinogen, said fibrinogen being made present at said site of treatment at a concentration of about 10 mg/ml or less.

37. (Previously amended) A therapeutic composition effective on contact with thrombin at a site of treatment in a patient as a tissue adhesive, hemostat or sealant, said composition comprising non-autologous, non-single donor mammalian fibrinogen that polymerizes when provided in solution at said site at a concentration of about 30 mg/ml thereof or less, to a fibrin network having therapeutically effective strength, wherein said composition contains less than about 30% (w/w), based on total protein mass present therein, of proteins other than fibrinogen, and further comprises a sufficient amount of one or more low molecular weight physiologically compatible solutes such that said composition, if formulated as a lyophilized material, can be reconstituted therefrom at room temperature in sterile water for injection in about 30 minutes or less, at about 25 mg/ml of said fibrinogen; wherein said therapeutic composition is prepared by the following steps: (A) precipitating said fibrinogen from a

sample of non-human mammalian blood plasma with polyethylene glycol 1000; (B) resuspending said fibrinogen in solution; and (C) reprecipitating said fibrinogen with glycine, wherein reprecipitation of said fibrinogen with polyethylene glycol is performed only once and at least about 90% of the fibrinogen present in said sample is recovered, of which fibrinogen at least about 56% is clottable fibrinogen, said fibrinogen being made present at said site of treatment at a concentration of about 30 mg/ml or less.

38. (Previously added) The composition of Claim 1 wherein said therapeutically effective fibrinogen concentration at said site is about 10 mg/ml.

39. (Previously added) The composition of Claim 2 wherein said therapeutically effective fibrinogen concentration at said site is about 30 mg/ml.

40. (Previously added) The composition of Claim 13 wherein said therapeutically effective fibrinogen concentration at said site is about 30 mg/ml.

41. (Previously added) The composition of Claim 1 wherein said therapeutically effective fibrinogen concentration at said site is between about 5 mg/ml to about 10 mg/ml.

42. (Previously added) The composition of Claim 1 wherein at least about 80% of the fibrinogen is clottable fibrinogen.

43. (Previously added) The composition of Claim 1 wherein about 90% or higher of the fibrinogen is clottable fibrinogen.

44. (Previously added) The composition of Claim 2 wherein at least about 80% of the fibrinogen is clottable fibrinogen.

45. (Previously added) The composition of Claim 2 wherein about 90% or higher of the fibrinogen is clottable fibrinogen.

46. (Previously added) The composition of Claim 13 wherein at least about 80% of the fibrinogen is clottable fibrinogen.

47. (Previously added) The composition of Claim 13 wherein about 90% or higher of the fibrinogen is clottable fibrinogen.

48. (Previously added) The composition of Claim 36 wherein at least about 80% of the fibrinogen is clottable fibrinogen.

49. (Previously added) The composition of Claim 36 wherein about 90% or higher of the fibrinogen is clottable fibrinogen.

50. (Previously added) The composition of Claim 37 wherein at least about 80% of the fibrinogen is clottable fibrinogen.

51. (Previously added) The composition of Claim 37 wherein about 90% or higher of the fibrinogen is clottable fibrinogen.